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REMARKS

The Examiner has rejected Claims 14-17, 28, and 30 under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Such rejection is deemed moot in view of the clarifications made hereinabove to such claims.

The Examiner has further rejected Claims 1, 11, 13, 14, 24, 26, and 28-30 under 35 U.S.C. 103(a) as being unpatentable over Chang et al. (U.S. Patent No.: 6,526,433) in view of Kingsford et al. (U.S. Patent No.: 6,574,737). Applicant respectfully disagrees with such rejection, especially in view of the amendments made hereinabove.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck,* 947 F.2d 488, 20 USPQ2d 1438 (Fed.Cir.1991). Applicant respectfully asserts that at least the first and third elements of the *prima facie* case of obviousness have not been met.

With respect to the first element of the *prima facie* case of obviousness, the Examiner states that it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the risk-assessment scan disclosed by Kingsford et al. in combination with the variable time out duration method disclosed by Chang et al. Applicant respectfully disagrees with this proposition, especially in view of the vast evidence to the contrary.

For example, Chang relates to a <u>system for dynamically setting timeouts</u>, while Kingsford relates to a <u>system for finding network vulnerabilities</u>. To simply glean features from a <u>system for finding network vulnerabilities</u>, such as that of Kingsford, and combine the same with the

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non-analogous art of <u>systems for dynamically setting timeouts</u>, such as that of Chang, would simply be improper. <u>Systems for finding network vulnerabilities</u> identify vulnerabilities in networks, while <u>systems for dynamically setting timeouts</u> set *binding handle*-related timeouts. "In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." In re Oetiker, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). See also In re Deminski, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986); In re Clay, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992) In view of the vastly different types of problems a <u>system for finding network vulnerabilities</u> addresses as opposed to a <u>system for dynamically setting *binding handle*-related timeouts</u>, the Examiner's proposed combination is inappropriate.

Thus, contrary to the Examiner's arguments, applicant's claimed feature would have been *unobvious* in view of the Chang-Kingsford combination, since the timeouts of Chang relate to binding handles that are used to point to a data structure that comprises general information that allows an application client and an application server to communicate to each other through remote procedure calls. The general information that makes up such data structure includes a host name and port number, the application functions that the server provides, the low level network protocol (TCP, UDP, etc.) that is being supported, etc. Thus, <u>the timeouts of Chang *teach away* from any sort of risk assessment, etc</u>. *In re Hedges*, 783 F.2d 1038, 228 USPQ 685 (Fed. Cir. 1986).

More importantly, with respect to the third element of the *prima facie* case of obviousness, the Examiner relies on the following excerpt from Kingsford (in combination with Chang) to meet applicant's claimed "performing a timeout prior to making a determination that the target is failing to respond to the risk-assessment scan."

> "These and other objects are also achieved by providing a method of
> performing a penetration test on a computer network, comprising
> performing a first computer network scan to gather information about a
> secured network resource in the computer network; performing a second
> computer network scan to gather information about a second secured
> network resource in the computer network; and automatically sharing
> output data from the first computer network scan with the second
> computer network scan." (see col. 2, lines 35-43)

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Such excerpt merely suggests vulnerability detection. There is not even a suggestion (in either of the cited references) of "performing a timeout prior to making a determination that the target is failing to respond to the risk-assessment scan" (emphasis added). Only applicant teaches such a timeout under such specific condition, namely prior to making a determination that the target is failing to respond to the risk-assessment scan.

Applicant respectfully asserts that at least the third element of the *prima facie* case of obviousness has not been met, since the prior art references, when combined, fail to teach or suggest all of the claim limitations, as noted above.

Nevertheless, despite the paramount differences highlighted above and in the spirit of expediting the prosecution of the present application, applicant has amended each of the independent claims to include the following subject matter (found in previous Claim 13 et al.):

"performing a risk-assessment scan-related timeout prior to making a determination that the target is failing to respond to the risk-assessment scan ...
wherein the risk-assessment scan is abandoned if the target fails to respond to the risk-assessment scan within the variable duration" (emphasis added).

The Examiner has relied on the aforementioned excerpt from Kingsford to make a prior art showing of such claimed features. However, it is clear that neither Chang nor Kingsford even suggest a *risk-assessment scan*-related timeout, let alone the abandonment of a risk-assessment scan if the target fails to respond to the risk-assessment scan within an associated variable duration.

Again, applicant respectfully asserts that at least the third element of the *prima facie* case of obviousness has not been met. A notice of allowance or a specific prior art showing of all of applicant's claim limitations, in combination with the remaining claim elements, is respectfully requested.

With respect to the dependent claims, applicant has carefully reviewed the excerpts relied upon by the Examiner to reject the same, and has found serious deficiencies in the Examiner's

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application of the prior art. Just by way of example, the Examiner relies on the foregoing excerpt from Kingsford to meet applicant's claimed "wherein the timeout is performed for each of the risk-assessment scan modules" (see Claim 11 et al.). However, such excerpt and the remaining cited references do not even suggest a *risk-assessment scan*-related timeout, let alone separate timeouts for each of a plurality of risk-assessment scan modules.

Still yet, the Examiner relies on the following excerpt from Chang to meet applicant's claimed "wherein the timeout is set by adding a default value with a variable value which is set as a function of the measured network condition" (see Claim 8 et al.), and "wherein the timeout is set by multiplying a default value with a variable factor which is set as a function of the measured network conditions" (see Claim 9 et al.).

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"The pre-defined methods in blocks 80 and 82 are each not limited to
any specific method, and any suitable method may be used for
calculating an optimal timeout value. For example, one such method may
be that the optimal value is calculated from a simple formula such as
two times the largest value (i.e. largest response time) in the
response time array. Another such method may involve a more complicated
formula in which the optimal value is obtained from some type of
heuristics or statistics calculation. An example of such heuristics or
statistics calculation may involve tracking and obtaining the most
recent twenty-five (25) elements or values (i.e. the last 25 response
times) from the response time array. The average and standard
deviations are computed for these response time values. The optimal
value is obtained as the sum of the average plus three standard
deviations. Of course, the "quality" of the pre-defined method
determines how fine the timeout value is able to be tuned to reflect
the real environment. The choice of the method also determines the size
of the array. In the first example, the size of the array is just one
because only the largest value needs to be tracked and stored. In the
second example, the size of the array needs to be twenty five in order
to track and store the twenty five most recent RPC response times."
(see col. 6, line 49 - col. 7, line 5)
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After carefully reviewing such excerpts and the remaining Chang reference, however, it is clear that such excerpt and the remaining cited references do not even suggest a <u>default value</u>, let alone adding a default value with a variable value, or multiplying a default value with a variable factor.

Again, applicant respectfully asserts that at least the third element of the *prima facie* case of obviousness has not been met. A notice of allowance or a specific prior art showing of all of

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applicant's claim limitations, in combination with the remaining claim elements, is respectfully requested.

Still yet, applicant brings to the Examiner's attention the following additional dependent claims that have been added for full consideration:

"wherein the timeout is set by the following algorithm:

if R_{actual} is < or > $R_{default}$ by ($R_{default}$ * F),
then $T_{actual} = T_{default} + R_{actual}$ * N;
else $T_{actual} = T_{default}$; and
where:

$R_{default}$ = default response duration,

R_{actual} = actual response duration,

$T_{default}$ = default timeout value,

T_{actual} = actual timeout value,

F = deviation factor, and

N = normalizing factor" (see Claim 31);

"wherein the timeout is set utilizing a plurality of network condition probes that gather multiple network condition measurements on a single target" (see Claim 32);

"wherein the measured network conditions are measured for an entire network segment on which a plurality of target components is located" (see Claim 33); and

"wherein the source is capable of reducing a latency of the risk-assessment scan by setting the variable duration to a minimal value, while avoiding the abandonment of vulnerable systems reachable over high latency networks by increasing the variable duration to accommodate such scenarios" (see Claim 34).

Yet again, a notice of allowance or a specific prior art showing of all of applicant's claim limitations, in combination with the remaining claim elements, is respectfully requested.

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In the event a telephone conversation would expedite the prosecution of this application, the Examiner may reach the undersigned at (408) 971-2573. For payment of any additional fees due in connection with the filing of this paper, the Commissioner is authorized to charge such fees to Deposit Account No. 50-1351 (Order No. NAI1P008/01.113.01).

Respectfully submitted,

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